AMENDMENTS TO THE CLAIMS:

1-6. (Canceled)

7. (Amended) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process, comprising the steps of:

a) treating a printed circuit board with a brown oxide pretreatment composition for cleaning a copper surface and improving adhesion of a polyimide surface;

b) water-washing the printed circuit board of a);

c) pre-dipping the printed circuit board of b);

d) forming a conversion coating on the printed circuit board of c);

e) water-washing the printed circuit board of d); and

f) drying the printed circuit board of e);

wherein the brown oxide pretreatment composition for cleaning a copper surface and improving adhesion of a polyimide surface used in step a) comprises:

5 - 15 g/L of a hydroxylamine;

190 - 210 g/L of a hydroxide compound;

at least one additive selected from 3 - 6 g/L of a cleaner adjuvant, 0.1 - 5 g/L of an antifoaming agent and 1 - 10 g/L of a precipitation inhibitor; and

the balance of water.

8. (Original) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim 7, further comprising a water-washing step following the pre-dipping step.

9. (Original) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim 7, wherein the step a) of treating a printed circuit board with a brown oxide pretreatment composition is carried out at 30 - 90°C for 10 seconds - 10 minutes.

10. (Canceled)

11. (Currently amended) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim **7~~10~~**, wherein the **hydroxyl**amine is selected from the group consisting of monoethanolamine (MEA), diethanolamine (DEA), triethanolamine (TEA), 2-aminoethanol, N,N-bis-2-hydroxypropylethanolamine, N-oleoylethanolamine and mixtures thereof.

12. (Currently amended) A method for improving adhesion of a polyimide

surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim 7~~10~~, wherein the hydroxide compound is selected from the group consisting of sodium hydroxide (NaOH), potassium hydroxide (KOH), barium hydroxide (BaOH), ammonium hydroxide, tetramethylammoniumhydroxide, tetraethylammonium-hydroxide, tetrapropylammoniumhydroxide and mixtures thereof.

13. (Currently amended) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim 7~~10~~, wherein the cleaner adjuvant is at least one compound selected from the group consisting of gluconic acid soda, polyglycol, ethoxylated fatty alcohol, polyethoxylated monoalkanolamide, EO/PO block copolymer and mixtures thereof.

14. (Currently amended) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim 7~~10~~, wherein the antifoaming agent is an alkylphosphate or fatty acid sulfate.

15. (Currently amended) A method for improving adhesion of a polyimide surface by applying the brown oxide pretreatment composition to a brown oxide process according to claim 7~~10~~, wherein the precipitation inhibitor is selected from the group consisting of N-methyl-2-pyrrolidone, N-cyclohexyl-2-pyrrolidone, 2-pyrrolidone,

dimethylformamide, dimethyl acetamide, tetrahydrofuran, acetonitrile, dioxane, alcohol and mixtures thereof